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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,389	03/12/2004	Frank W.R. Chaplen	245-67734-01	3168
<div>24197 7590 12/28/2007 KLARQUIST SPARKMAN, LLP 121 SW SALMON STREET SUITE 1600 PORTLAND, OR 97204</div>				
<div>EXAMINER SIMS, JASON M</div>				
<div>ART UNIT PAPER NUMBER 1631</div>				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/801,389

Applicant(s)

CHAPLEN ET AL.

Examiner

Jason M. Sims

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,9,10,12-18,20-22,80-83,108-110,115,118 and 119 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 9-10, 12-18, 20-22, 80-83, 108-110, 115, and 118-119 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/1/2007 has been entered.

Applicant's cancellation of claims 3-8, 11, 19, 23-79, 84-107, 111-114, and 116-117 in the response filed 10/1/2007 is acknowledged.

Claims 1-2, 9-10, 12-18, 20-22, 80-83, 108-110, 115, and 118-119 are the current claims hereby under examination.

The following rejection is being newly made:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 9-10, 12-18, 20-22, 80-83, 108-110, 115, and 118-119 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 comprises the method step of "determining software expert parameters, where the expert encodes a function that maps feature space vector to a scenario," which has been deemed as vague and indefinite. The method step appears to be

reciting a method of "determining," but does not recite steps of said determining. Instead the method step recites a step of "determining software expert parameters," which appear to already be determined, which causes said method step to be vague and indefinite as to what exactly comprises the "determining." Clarification via clearer claim wording is required.

Claim 9 comprises the vague and indefinite wording of "tuning the integrated expert." It is unclear as to what exactly constitutes "tuning" or how it is performed. It appears that tuning may be a form of optimization, but it is unclear as to how the expert is tuned or optimized. Clarification via clearer claim wording is required.

Claim 9 recites the limitation "where transforming" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the integrated expert" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "where attempting" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 has been deemed as vague and indefinite. Claim 12 is a method of classifying conditions by exposing them to scenarios wherein the method depends from a method which classifies scenarios by exposing them to conditions, which causes said claim to be vague and indefinite. Clarification via clearer claim wording is required.

Claims 2, 10, 13-18, 20-22, 80-83, 108-110, 115, and 118-119 are rejected as being dependent from a rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2, 9-10, 12-18, 20-22, 80-83, 108-110, and 118-119 are rejected under 35 U.S.C. 102(e) as being anticipated by Bevilacqua et al. (US P/N 6,692,916).

The claims are directed to a method of classifying a scenario, comprising exposing a system to a bioactive condition, representing a response of the system, or portion thereof, to the bioactive condition; and attempting to classify a scenario by database comparison, determining software expert parameters and outputting a classification result to a user.

Bevilacqua et al. teaches claims 1-2, and 118-119 at the abstract, at col. 2, lines 34-67, and col. 3 – col. 6. Bevilacqua et al. discusses a method for evaluating the effect on a biological condition affected by an agent and another method for evaluating the effect on a biological condition by a first agent in relation to the effect by a second

agent, which the target cells that were administered the agents represent the exposed system as cited in claims 1 and 2 and the agents administered to the target cells represents the bioactive condition to which the system is exposed. Bevilacqua et al. further discusses making calibrated profile data sets that correspond to a measure of the biological condition as affected by the agent, which represents representing a response of the system to the bioactive condition. Bevilacqua et al., at the abstract, discusses a method for evaluating a biological condition of a subject using a calibrated profile data set, which represents classifying the scenario by database comparison. Bevilacqua et al. further discusses the evaluation being a database comparison at col. 4, where evaluating is a comparison of the first instance of the calibrated profile data set in relation to the data in the condition database, which represents classifying a scenario by database comparison. Bevilacqua et al. discusses exposing a biological system to two or more bioactive conditions consecutively and where numerical and non-numerical feature descriptors are obtained. Bevilacqua et al. teaches at col. 4, lines 1-50 comprising profile data sets, which provide measurements of the biological condition in response to system being exposed to an agent, such as RNA, protein, or numerical gene expression values, which all represent data sufficient to determine a numerical feature space vector. Bevilacqua et al. further teaches using a condition database, where the records are from a population of subjects from known scenarios, for comparing the measured values as a result of the exposure in order to evaluate the resulting biological condition, which represents providing a database for comparison by exposing a system to known scenarios to determine a numerical feature space vector.

Furthermore, Bevilacqua et al. at columns 3-6 teaches transforming the profile data set to a calibrated profile data set and comparing calibrated profile data sets for classifying conditions, which reads on transforming the data, using a database, determining software expert parameters, and weighting the expert parameters.

Bevilacqua et al. at columns 3-6 teaches the limitations of claims 9-10.

Bevilacqua et al. discusses performing experiments by exposing biological samples to different scenarios, collecting the data and calibrating the profile data sets with respect to the different conditions, which represents determining expert parameters based on extracted data, where experts encode functions that map the feature space vector to a set of scenarios; and tuning the integrated expert wherein tuning comprises adaptive expert calibration.

Bevilacqua et al. teaches claims 12-18, 20-22, and 80-83 at col.3 – col. 6, col. 18, lines 53-67, col. 19-21, col. 22, lines 1-62, col. 24, lines 16-49, and col. 25, lines 25-30. Bevilacqua et al. teaches at col. 22, lines 57-62, generating signature profiles for different scenarios. At col. 19-21, Bevilacqua et al. teaches extracting the data and creating calibrated profiles and signature panels, which represent calculated locations in feature space representing the characteristic signature of the bioactive condition. Bevilacqua et al. col. 25, teaches using the calibrated profile data sets to determine likelihood that a bioactive condition is a known bioactive condition. Bevilacqua et al. at col. 22, teaches generating signature panels about a previously undescribed agent and may be derived optionally together with a signature profile to use as a gold standard, which is comparing the standard against those panels created later for determining a

likelihood that a complex scenario is a scenario. Bevilacqua teaches exposing cells to several bioactive conditions, which reads on exposing a single biological system serially to two or more bioactive conditions wherein the elicitor comprises bioactive conditions and a protocol used to apply the bioactive conditions to one or more biological systems. Bevilacqua et al. at columns 3-6 discusses performing experiments by exposing biological samples, which are populations of cells, to different scenarios, collecting the data and calibrating the profile data sets with respect to the different conditions, classifying the scenarios and generating a database of scenarios. Bevilacqua et al. at col. 24, lines 16-49, teaches that the invention is automated on a computer program, which inherently reads on calculating relative location of data clusters using software experts.

Bevilacqua et al. teaches claims 108-110, at col. 24, lines 16-49. Bevilacqua et al. discusses the invention being implemented on a computer program and fixed on a tangible medium such as a computer readable medium, for use in a computer system.

Claim Rejections - 35 USC § 103

The following rejection is being newly made:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 115 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bevilacqua et al. as applied to claims 1-2, 9-10, 12-18, 20-22, 80-83, 108-110, and 118-119 above, and further in view of Basiji et al. (US P/N 6,211,955).

The claims are directed to a method of classifying a scenario, comprising exposing a system to a bioactive condition, representing a response of the system, or portion thereof, to the bioactive condition; and attempting to classify a scenario by database comparison, determining software expert parameters and outputting a classification result to a user.

Bevilacqua et al. does not teach a method where the change detected in the living cells is cytoplasmic streaming.

Basiji et al. also teaches classifying cells and scenarios and at col. 8, lines 12-47 teaches detecting parameters of biological samples for use in classifying the cells such as the cytoplasm.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention because the nature of the problem of classifying cells for such as classifying cancer cells would lead inventors to look at references relating to possible

solutions to that problem and other techniques that further improve such solutions. Therefore, it would have been obvious to use the known technique as taught by Basiji et al. for classifying cells for use as such things as classifying cancer cells with classifying cells as taught by Bevilacqua et al. because having more data in the profile data sets would lead to more accurate classification of cells.

Response to arguments:

Applicant's arguments filed 10/1/2007 have been fully considered but they are not persuasive.

Applicant argues that the amendment to the independent claim to include limitations of a claim previously not rejected over prior art causes said claims to be in condition for allowance.

Applicant's arguments are not found persuasive because upon further consideration the prior art reference made of record has been interpreted as teaching said claim limitations as stated above in the instant office action.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Sims, whose telephone number is (571)-272-7540.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Borin can be reached via telephone (571)-272-0713.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the

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Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

// Jason Sims //

MICHAEL BORIN, PH.D
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Michael Borin', is written below the printed name and title.